Appl. No. 10/809,607
Response Dated July 27, 2007
Reply to Office Action of April 27, 2007

Docket No.: 1020.P18644
Examiner: Laforgia, Christian A.
TC/A.U. 2131

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1.   (Currently Amended) An apparatus, comprising:

a network interface to communicate frames of information in accordance with a wireless protocol; and

a frame authentication module operatively responsive to said network interface, said frame authentication module to authenticate frames communicated by said network interface or encode frames with authentication information if the frames do not include authentication information.

2.   (Currently Amended) The apparatus of claim 1, wherein said network interface comprises a network interface operable ~~defined in accordance~~ with a ~~the~~ Universal Mobile Telecommunication System ~~Specification~~.

3.   (Original) The apparatus of claim 1, wherein said network interface comprises a network interface configured in accordance with one of an Iub Specification and an Iur Specification.

4.   (Original) The apparatus of claim 1, wherein said wireless protocol comprises a framing protocol defined by one of an Iub Specification and an Iur Specification.

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5.   (Original) The apparatus of claim 1, wherein said authentication module

comprises:

    an authentication encoding module to encode each frame with authentication

information; and

    an authentication decoding module to authenticate each frame using said

authentication information.

6.   (Currently Amended) The apparatus of claim [4] 5, wherein said authentication

encoding module generates said authentication information using an authentication key,

data from said frame, and a change parameter.

7.   (Currently Amended) A system, comprising:

    a node B system having a first network interface;

    a first radio network controller to communicate with said node B system, said first

radio network controller having a second network interface; and

    a frame authentication module for each of said first and second network

interfaces, said frame authentication module to authenticate frames communicated

between said first and second interfaces or encode frames with authentication information

if the frames do not include authentication information.

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8.   (Currently Amended) The system of claim 7, wherein said network interfaces each comprise network interfaces ~~defined in~~ operable ~~accordance~~ with ~~the~~ a Universal Mobile Telecommunication System ~~Specification~~.

9.   (Original) The system of claim 7, wherein said network interface comprises a network interface configured in accordance with one of an Iub Specification and an Iur Specification.

10.   (Original) The system of claim 7, wherein each frame authentication module comprises:

an authentication encoding module to encode each frame with authentication information; and

an authentication decoding module to authenticate each frame using said authentication information.

11.   (Original) The system of claim 10, wherein said authentication encoding module generates said authentication information using an authentication key, data from said frame, and a change parameter.

12.   (Original) The system of claim 7, further comprising:

a second radio network controller to communicate with said first radio network controller, said second radio network controller having a third network interface; and

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a frame authentication module for said third network interface, said frame authentication module to authenticate frames communicated between said second and third interfaces.

13.   (Original) A method, comprising:

receiving a frame of information over a wireless medium;

determining whether said frame includes authentication information;

authenticating said frame using said authentication information; and

encoding said frame with authentication information if said frame does not include said authentication information.

14.   (Original) The method of claim 13, wherein said authenticating comprises:

retrieving an authentication key;

duplicating said authentication information using said authentication key;

retrieving said authentication information from said frame;

comparing said duplicated authentication information with said retrieved authentication information; and

authenticating said frame in accordance with said comparison.

15.   (Original) The method of claim 13, wherein said encoding comprises:

generating said authentication information; and

storing said authentication information in a spare extension field of said frame.

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16. (Original) The method of claim 15, wherein said generating comprises:

retrieving an authentication key;

retrieving data from said frame;

retrieving a change parameter; and

creating said authentication information in accordance with an authentication

algorithm using said authentication key, said data, and said change parameter.

17. (Original) An article comprising:

a storage medium;

said storage medium including stored instructions that, when executed by a

processor, result in receiving a frame of information over a wireless medium, determining

whether said frame includes authentication information, authenticating said frame using

said authentication information, and encoding said frame with authentication information

if said frame does not include said authentication information.

18. (Original) The article of claim 17, wherein the stored instructions, when executed

by a processor, further result in said authenticating by retrieving an authentication key,

duplicating said authentication information using said authentication key, retrieving said

authentication information from said frame, comparing said duplicated authentication

information with said retrieved authentication information, and authenticating said frame

in accordance with said comparison.

19.   (Original) The article of claim 17, wherein the stored instructions, when executed

by a processor, further result in said encoding by generating said authentication

information, and storing said authentication information in a spare extension field of said

frame.

20.   (Original) The article of claim 19, wherein the stored instructions, when executed

by a processor, further result in said generating by retrieving an authentication key,

retrieving data from said frame, retrieving a change parameter, and creating said

authentication information in accordance with an authentication algorithm using said

authentication key, data, and change parameter.